41 次の文章を読み、問いに答えよ。（東京大 2015）

Rebecca was getting ready to start her bookstore, making a business plan, applying for loans. "A *bookstore*?" Harriet, her mother, said. "With your education you want to start a store, and one that doesn't even have a hope of making money? What is your life adding up to?"

Rebecca was hurt, furious. They had one of their old fights, made worse by the fact that Rebecca hadn't realized these old fights were still possible. The recent long peace since the beginning of Harriet's illness had given Rebecca a false sense of safety. She felt deceived.

Then Harriet sent Rebecca a check, for quite a lot of money. *To help with the bookstore*, she wrote on the card.

"You can't (27) this," Rebecca said,

"It's what I want to do," Harriet said,

Then she got sick again.

Pneumonia* — not life-threatening, but it took a long time to get over. Rebecca drove down and made Harriet chicken soup and vanilla custard, and lay across the foot of Harriet's bed.

So this has been going on for years and years. Harriet getting sick and recovering. Rebecca showing up and withdrawing, Living her life between interruptions.

Rebecca is tired. Harriet has been sick on and off for more than a decade. Rebecca has just driven four hours from Boston to get to the Connecticut nursing home where Harriet now lives. She is taking two days off from the small bookstore she (28), paying her part-time assistant extra to cover for her. She's brought a shopping bag full of things Harriet likes. She has walked into the room, and Harriet has barely looked away from the TV to say hello. Rebecca pulls over a chair and sits facing her mother. Harriet is in a wheelchair, paralyzed again — it has happened before; she has some rare back disease, but this time the doctor says it is permanent.

Rebecca feels guilty about not coming down to see her mother more often. Harriet is always mentioning something she needs — lavender bath powder, or socks, or a blanket to put over her legs when they wheel her outside. Rebecca mails what she can, sometimes (29) by but at other times annoyed by the many requests.

The last time Rebecca visited, on the day Harriet moved to the nursing home, the nurse put an enormous plastic napkin on Harriet's front before bringing in her dinner tray. Harriet allowed it, looking at Rebecca with a kind of stunned sadness; of all the insults received on that day, this was the one that undid her. "She doesn't need that," Rebecca

told the nurse.

"We do it for everybody."

"Right, but my mother doesn't need it."

(A)So that was one small battle that Rebecca was there to win for Harriet. Without Rebecca, Harriet could have won it just fine for herself. Both of them knew this — and yet, between them, love has always had to be proved. It is there; and it gets proved, over and over. Some of their worst fights, confusingly, seem to both prove and disprove it: two people who didn't love each other couldn't fight like that— (B)certainly not repeatedly.

Nearly fifteen years ago, Harriet seemed to be dying. She had stage four colon cancer.** Rebecca believed that her mother was dying, and for the first time, she began to feel close to her. She sometimes lay in bed at night and cried, alone, or with Peter Bigelow, who taught architectural history at Harvard. He held her and listened while she talked about how hard it was to be (30) her mother and yet losing her at the same time.

Incredibly, Harriet didn't die. The operation was successful, and she kept having more surgeries. Rebecca kept driving down and spending time with her mother. But she couldn't keep it up: the attention, the sympathy, the friendship, the aimless joy of just hanging around with her mother, watching the TV news. She had burned herself out.

Harriet started feeling that Rebecca wasn't visiting often enough. It was true, she was coming down less often. But oh, that "enough." That tricky guilty-sounding word that doesn't even need to be spoken between a mother and daughter because both of them can see it lying there between them, injured and complaining, (31)a big violent-colored wound.

Peter asked Rebecca how she would feel about getting married. That was how he did it: not a proposal, but an introduction of a topic for discussion. She said she wasn't sure. The truth was that when he said it, she got a cold, sick feeling in her stomach. This lovely, good, thoughtful man: what was the matter with her? She was nervous, and also irritated that he seemed so calm about the whole thing, that he wasn't desperate for her, that he wasn't knocking her over with forceful demands that she belong to him. On the other hand, she wasn't knocking him over either.

Then his book was finished and published. He brought over a copy one night, and she had a bottle of champagne waiting. "Peter, I'm so happy for you," and she kissed him. She turned the pages, and her own name jumped out at her: "... and to Rebecca Hunt, who has given me so many pleasant hours."

It was understatement, wasn't it? The kind of understatement that can exist between two people who understand each other? What did she want, a dedication that said, "For Rebecca, whom I love with all my heart and would die for"?

Here was something she suddenly saw and disliked in herself, something she might have inherited from Harriet: a raw belief that love had to be declared and proved — intensely, loudly, explicitly.

注　*pneumonia　肺炎　　**colon cancer　結腸癌

(A) 下線部(A)を、指示代名詞 that の内容を明らかにして和訳せよ。

(B) 下線部(B)を、省略されている部分を補って和訳せよ。

(C) 以下の問いに答え、解答の記号を書け。

✓ 空所(27)〜(30)には単語が一つずつ入る。それぞれに文脈上最も適切な語を次のうちから一つずつ選べ。ただし、動詞の原形で示してあるので、空所に入れる際に形を変える必要があるものもある。また、同じ記号を複数回用いてはならない。

(a) afford	(b) anticipate	(c) complain	(d) find
(e) own	(f) participate	(g) prevent	(h) talk
(i) touch	(j) walk		

✓ 下線部(31)で、a big violent-colored wound と呼ばれているものは何か。最も適切なものを次のうちから一つ選べ。

(a) Harriet's illness.
(b) The nurse's insult.
(c) Rebecca's tiredness.
(d) The word "enough."
(e) Peter's unenthusiastic proposal.

✓ 本文の最後で Rebecca はどのような認識に至ったか。正しいものを一つ選べ。

(a) She is more like Peter than she thought.
(b) She is more like Harriet than she thought.
(c) She doesn't really like her mother, Harriet.
(d) She doesn't really like her boyfriend, Peter.
(e) She doesn't really have the capacity to love.

✓ 本文の内容と合致しないものはどれか。一つ選べ。

(a) Harriet didn't want Rebecca to run a bookstore, which she thought would be unprofitable.
(b) Rebecca was angry when she found that the nurse was treating her mother as if she were a baby.
(c) Rebecca was so happy about the publication of Peter's book that she kissed him, grateful to him for mentioning her in it.
(d) Relations between Rebecca and her mother improved when the latter was hospitalized for a serious illness about fifteen years ago.
(e) Although Peter is a fine man that Rebecca should be happy to marry, she felt irritated when he didn't declare his love to her strongly enough.

42 次の英文を読んで、下記の問いに答えよ。(久留米大・医 2014)

People have attempted to *simulate human voices in machines for quite some time. In the late 1700s, Hungarian scientist Wolfgang von Kempelen used whistles, resonance chambers, and other objects to create voice sounds for his "speaking machine." With the rise of computers, scientists were able to create artificial voices by storing and digitally (ア) real voice sounds. By the 1970s, these computer-generated voices were widely used. Although these early voices were understandable, they had a distinct mechanical or "robotic" sound to them.

Coming up with more natural-sounding voices has been a challenge due to the complex nature of language. To produce a natural-sounding voice, scientists need to simulate not only the individual sounds of language, but also the volume, pitch, rhythm, and tones that help to express (イ) . Natural-sounding computer voices are now used to provide information to people in a variety of applications, from automated phone lines to language learning programs. Many systems are also able to listen to users' questions and statements and respond to them.

One good example of this comes from the BMW car company. BMW has programmed cars to both listen and speak to the driver. The car can give directions, provide warnings and information about traffic and safety conditions, and even control certain functions such as raising or lowering the windows or playing music. When BMW first released cars with a computer-generated voice, many drivers had a negative reaction to it because drivers (ウ) the voice as female. German drivers were uncomfortable with a "female" voice giving directions. As a result, BMW recalled the cars and gave them "male" voices.

The reaction to the female voice was emotional. It had no reasoning behind it. Common sense says that the "gender" of the voice in the car shouldn't matter because drivers know that they are listening to a computer, not a person. But even without a (エ) representation of the voice, such as a male or a female face, people reacted with the same stereotypes they would apply to a person. Studies have also shown that people react similarly to other aspects of computer voices, such as the "personality" of the voice or its level of "politeness."

Researchers now know that voice interfaces are actually social interfaces; that is, people will react to a computer using the same rules and (オ) that they would apply to people. As a result, designers of these systems consider not only the sounds of the voices they use, but also their psychological effects on users.

*simulate to imitate the appearance or character of

1. 本文の空所(ア) ～ (オ)に入れるのに最も適切な語を、下記の(a)～(d)からそれぞれ一つずつ選びなさい。

(ア)	(a) regressing	(b) processing	(c) suppressing	(d) digressing
(イ)	(a) waves	(b) humanity	(c) balance	(d) meaning
(ウ)	(a) perfected	(b) personified	(c) perceived	(d) perpetuated
(エ)	(a) gradual	(b) visual	(c) sensual	(d) usual
(オ)	(a) expectations	(b) frustrations	(c) manifestations	(d) computations

2. 本文の内容と最もよく適合するものを下記の(a)～(g)から4つ選びなさい。

(a) The usefulness of computers is enhanced by whistles and resonance chambers.

(b) The use of automated voice systems is not limited to the automotive industry.

(c) Studies suggest that people may respond irrationally to a voice produced by a computer.

(d) Drivers' initial response to a 'female' voice was logical and understandable.

(e) It is yet impossible for machines to produce sounds that accurately resemble the human voice.

(f) Some applications enable people to engage in short dialogues with machines.

(g) Computers have allowed us to tell cars how fast to drive for many years.

(h) The quest to invent a machine that sounds like a human is not a recent one.

４３ 次の文章を読んで、問 1～5 に答えなさい。（神戸大 2019）

They were tall, burly men in rugby jerseys with torn-off sleeves that exposed their muscles and they had almost passed when one of them turned. He must have said something because the entire group halted and looked. They stared at the small European woman with the powder blue parasol standing beside a pink baby-grand piano as cargo ships unloaded around her.

A brainwave forced a cry from Mrs. Patterson's lips. She shuffled towards them. "Excuse me, hello. excuse me!"

The men gathered about, smelling of tuna fish.

'I was wondering if you would all be so kind as to help me out. You see. (1)I've bitten off rather more than I can chew. I must move that..." Their gaze followed her small pale hand to the piano sitting on the dock. "...up there." Their heads followed her finger back to the large wooden house high on the hillside.

Malakai Saulo, the smallest man in the group, stepped forward. "We're on our way home, Mrs. — " "— Patterson."

"Yes, we know who you are. We have lived here our whole lives."

"Yes, of course you have..." she said. There was now a hint of pleading in her tone. (A) "I was just wondering if you good men would help me. "

They looked at one another. Someone cracked his knuckles.

"Listen Mrs. Patterson," said Malakai, "we wake up at five a.m. Monday to Friday. We start work at six a.m. and we work hard all day gutting, slicing, canning fish. Today we did over twelve hundred tuna and we are paid only enough money to feed our families and send our children to school. All we want to do now is go home and drink a cold beer and go swimming with our kids." The men grunted in approval at Malakai's speech.

"Alright, how much then?" said Mrs. Patterson.

(B)"How much for what?" said Malakai.

"How much money will it take for you to move that piano?"

"This isn't about money, Mrs. Patterson. It's about tired men who have done an honest day's work and want to go home to their families."

"Alright, ten dollars," she said.

"Ten dollars each?"

"Ten dollars total."

(C)"We'll do it for fifteen."

"Fifteen?"

"Each."

(D)"No Way! That's outrageous!" said Mrs. Patterson.

"No, Mrs. Patterson, (2)that's capitalism."

Mrs. Patterson's chest swelled. (3)"Now, you look here..."

Malakai shrugged and turned to leave, the men following. Mrs. Patterson's cheeks shook, her eyebrows clenched and a sound grew in her chest. It worked its way to her throat and leapt from her lips, a sound more shrill than the cannery siren. "NOOOO!" She felt faint. It was the heat, the smell of the docks, the canniness of the cannery men. And that damn piano! That damn pink piano sitting there on the dock like a big helpless baby.

"Alright!" she cried.

The men halted. They turned around, teeth flashing, and swept past her onto the dock where they assembled about the piano; ten big muscled men with size forty-six shoes and legs as tough as tree roots. Malakai counted and on "three" the piano rose into the sky in one momentous action.

問1　下線部(1)のイディオムはこの場合何を指すのか。最も適切なものを下から一つ選びなさい。

(ア) She ate too much tuna for lunch.
(イ) She had something she couldn't carry alone.
(ウ) She didn't have enough money left to pay the men.
(エ) She didn't know who to ask for help.

問2　下線部(2)について、that の指す内容を明らかにしたうえで、日本語で具体的に説明しなさい。

問3　波線部(A)～(D)にある表現はどのような行為を指しているのか。最も適切なものを下からそれぞれ一つ選びなさい。ただし、同じ記号は一度しか使えません。

(ア) greeting　(イ) counter-offering　(ウ) offering
(エ) clarifying　(オ) requesting　(カ) rejecting

問4　下線部(3)の発言は途中で終わっているが、その続きにパターソン夫人は何を言おうとしたと考えられるか。最も適切なものを下から一つ選びなさい。

(ア) "I'm not paying that much."
(イ) "That's not enough."
(ウ) "Can you see this?"
(エ) "Here you are."

問5　結局パターソン夫人は謝礼をいくらあげることになるのか。最も適切なものを下から一つ選びなさい。

(ア) 10 dollars　(イ) 20 dollars　(ウ) 30 dollars
(エ) 100 dollars　(オ) 150 dollars

44 次の英文を読み、以下の設問に答えなさい。(神戸市外国語大 2019)

As we fill our days with more and more 'doing', many of us are finding that non-stop activity does not maximize productivity. Researchers are learning that it is not just that the work we produce at the end of a 14-hour day is of worse quality than when we're fresh. This pattern of working also undermines creativity and cognition. Over time, it can make us feel physically sick, as if we have no purpose.

Think of mental work as doing push-ups, says Josh Davis, author of *Two Awesome Hours*. Say you want to do 10,000. The most 'efficient' way would be to do them all at once without a break. We know instinctively, though, that (1)that is impossible. Instead, if we did just a few at a time, between other activities and stretched out over weeks, hitting 10,000 would become far more feasible. "The brain is very much like a muscle in this respect", Davis writes. "(2)Set up the wrong conditions through constant work and we can accomplish little. Set up the right conditions and there is probably little we can't do."

Pushing ourselves to work for hours without a break can be harmful, some experts say. One analysis found that long working hours increased the risk of coronary heart disease by 40% — almost as much as smoking (50%). Another found that people who worked long hours had a significantly higher risk of stroke, while people who worked more than 11 hours a day were almost 2.5 times more likely to suffer from major depression than those who worked seven to eight. In Japan, this has led to the disturbing trend of *karoshi*, or death by overwork.

If you're wondering whether this means that you might want to consider taking that long-overdue holiday, the answer may be yes. One study of businessmen in Helsinki found that over 26 years, executives and businessmen who took fewer holidays in midlife suffered both earlier deaths and worse health in old age.

(3)Holidays also can literally pay off. One study of more than 5,000 full-time American workers found that people who took fewer than 10 of their paid holidays a year had a little more than a one-in-three chance of getting a pay rise or a bonus over three years. People who took more than 10 days? A two in three chance.

On a global level, there is no clear correlation between a country's productivity and average working hours. With a 38.6-hour work week, for example, the average US employee works 4.6 hours a week longer than a Norwegian. But by GDP, Norway's workers contribute the equivalent of $78.70 per hour — compared to the US's $69.60. As for Italy, with an average 35.5-hour work week, it produces almost 40% more per hour than Turkey, where people work an average of 47.9 hours per week. (4)It even edges the United Kingdom, where people work 36.5 hours. All of those coffee breaks, it seems, may not be so bad.

The reason we have eight-hour work days at all was because companies found that cutting employees' hours had the effect reverse to what they had expected: it upped their productivity. If eight-hour days are better than 10-hour ones, could even shorter working hours be even better? Perhaps. For people over 40, research found that a 25-hour work week may be optimal for cognition, while when Sweden recently experimented with six-hour work days, it found that employees had better health and productivity.

This seems borne out by how people behave during the working day. One survey of almost 2,000 full-time office workers in the UK found that people were only productive for 2 hours and 53 minutes out of an eight-hour day. The rest of the time was spent checking social media, reading the news, having non-work-related chats with colleagues, eating — and even searching for new jobs.

We can focus for an even shorter period of time when we're pushing ourselves to the edge of our capabilities. Researchers have found that when engaging in the kind of 'deliberate practice' necessary to truly master any skill, we need more breaks than we think. Most people can only handle an hour without taking a rest. And many at the top, like elite musicians, authors and athletes, never dedicate more than five hours a day consistently to their craft.

(5) 'Rest', as some researchers point out, isn't necessarily the best word for what we're doing when we think we're doing nothing. The part of the brain that activates when you're doing 'nothing' plays a crucial role in memory consolidation and envisioning the future.

(Adapted from Amanda Ruggeri, "'The compelling case for working a lot less", 5 December 2017 (BBC) http://www.bbc.comicapital/story/20171204-the-compelling-case-for-working-a-lot-less)

問1　下線部(1)の that が表すものを、10 語以内の英語で書きなさい。

問2　下線部(2)を日本語に訳しなさい。

問3　下線部(3)のように言える理由を 25 字以上 35 字以下（句読点を含む）の日本語で説明しなさい。

				25					
				35					

問4　次の英文の空欄(　A　)(　B　)に適切な英単語を一つずつ入れて、下線部(4)を書き換えなさい。ただし、(　A　)に It を使用してはいけません。

(　A　) is even a little more (　B　) than the United Kingdom.

問5　下線部(5)のように言える理由を 40 字以上 50 字以下（句読点を含む）の日本語で述べなさい。

									40
									50

問6　次の英文の中から、本文の内容と合致するものを 1 つ選びなさい。

(ア) A study of 5,000 full-time workers in the US shows that workers who took more than 10 days-off have a higher chance of pay rises than those who took fewer days-off.

(イ) Comparing the health condition of company executives and businessmen according to the amount of holidays they take in midlife, researchers have found there is no significant difference between those who take longer holidays and those who take shorter ones.

(ウ) With a relevant positive relationship between the number of working hours and the efficiency of production, researchers advocate longer work days in order to achieve better production.

(エ) Research in Sweden shows that six-hour work days led to better health among workers with a slight decline in the rate of production.

45 次の文章を読んで、問 1〜4 に答えなさい。(神戸大 2019)

Barely 3 percent of the American work force cycles or walks to work with any frequency, despite the obvious merits: decreased risks for lifestyle-related diseases, environmental benefits and lower transportation costs. Ask people why they avoid what's known as active commuting, as many surveys have, and the primary reason cited is time. (1)Those things take too long, most say.

They're probably wrong. A new study published last month shows that people often overestimate the time required to commute actively, a miscalculation especially common when someone has secured a parking permit near the office.

For the study, researchers at Pennsylvania State University asked the school's faculty, staff and students to complete an extensive series of online questionnaires about their fitness, health, commuting and parking habits, comfort and ability on a bike or as pedestrians, distance from home to their main workplace on campus and how long they thought it would take them to either cycle or walk that distance. Only a few of the 505 respondents went by foot or bike; most of them were students. Estimates of commuting times were then compared with the corresponding route times calculated by Google Maps. The researchers independently timed some of the routes by walking or riding them.

The survey participants — faculty and staff members above all — proved to be generally poor at guessing active-commuting times. About 90 percent of their estimates were too (A) by at least 10 minutes. The few assessments (B) to Google's were almost always made by riders or walkers. Parking availability and distances affected the estimates. Those with parking permits, a fiercely sought-after campus amenity, tended to overestimate active-commuting times significantly; the (C) someone lived to the workplace, the (D) the guesses. Confidence had an outsize effect, too. The people surveyed, especially women, who had little bicycling experience or who did not feel physically fit thought that active commuting would require considerably more time than the Google calculations.

The study is limited, of course, because it relies on a narrow, self-selected group of respondents to provide information about themselves, a topic on which people can be surprisingly unreliable. The published results also did not investigate such pressing active-commuting concerns as hygiene, showers or the logistics of carrying changes of clothes. (2)But the study's results do indicate that time may be less of a barrier to active commuting than many might anticipate, says Melissa Bopp, the study's senior author.

問1　　下線部(1)について、Those things の指す内容を明らかにしたうえで、日本語で説明しなさい。

問2　　空所(　A　) ～ (　D　)に入る最も適切なものを下からそれぞれ一つ選びなさい。ただし、同じ記号は一度しか使えません。

(ア) better　　(イ) close　　(ウ) closer　　(エ) long
(オ) good　　(カ) poorer

問3　　下線部(2)を、「アクティブ(ヴ)」、「コミューティング」ということばを使わずに日本語に訳しなさい。

問4　　本文の内容と合致する文を下から二つ選びなさい。

(ア) Many surveys have avoided asking about active commuting.
(イ) Few of the respondents who cycled and walked were students.
(ウ) Students were better than professors and staff at estimating their commute time.
(エ) The researchers sometimes used Google Maps to check the actual time each commute took.
(オ) Fit people were better able to guess the time it would take them to commute by bicycle or foot.

46 次の英文を読んで、あとの設問に答えなさい。なお、*印がついている語句には、下に注があります。(京都工芸繊維大 2017)

How grains and potatoes shaped the world

In his 1997 bestseller *Guns, Germs and Steel*, historian Jared Diamond argued that the availability of nutritious* and easily domesticated* plants and animals gave some societies an advantage. In the Middle East there was barley* and wheat; in Asia there was millet* and rice. "People around the world who had access to the most productive crops became the most productive farmers," Diamond later said on his PBS TV show. More productivity led to more advanced civilizations.

However, the staple* crops associated with less-advanced peoples—such as manioc,* the white potato, the sweet potato and taro*—weren't necessarily less productive. In fact, manioc and the potato are superstar crops, less demanding of the soil and less thirsty for water. These plants still feed billions of people today.

Now, (イ)a provocative* new study suggests the fates of societies depended on a subtler problem with these plants. If this is right, it could dramatically complicate the popular theory of the agriculture-driven dawn of civilization that has appeared in textbooks for generations.

The study, published last year by economists in the United Kingdom and Israel doing new work on archaeological* and anthropological* evidence, attempts to explain (ロ)a strange pattern in agricultural practices. The most advanced civilizations all tended to cultivate grain* crops, like wheat and barley and corn. Less advanced societies tended to rely on root crops like potatoes, taro and manioc.

It's not that grain crops were much easier to grow than tubers,* or that they provided more food, the economists say. Instead, the economists believe that grain crops transformed the politics of the societies that grew them, while tubers held them back.

The argument depends on the differences between how grains and tubers are grown. Crops like wheat are harvested once or twice a year, yielding piles of small, dry grains. These can be stored for long periods of time and are easily transported—or stolen.

Root crops, on the other hand, don't store well at all. They are heavy, full of water, and rot quickly once taken out of the ground. Cassava, for instance, grows year-round and in ancient times, people only dug it up right before it was eaten. This provided some protection against theft in ancient times. It's hard for thieves to run away with your harvest when most of it is in the ground, instead of being kept in a storehouse somewhere.

The fact that grains posed a security risk may have actually been a blessing, though. The economists believe that societies cultivating crops such as wheat and barley may have experienced extra pressure to protect their harvests, encouraging the creation of warrior

classes and the development of complex hierarchies and taxation schemes.

"Since the grain has to be harvested within a short period and then stored for use until the next harvest, a visiting tax collector could readily take away part of the stored produce," the authors write. In ancient China, for instance, the government depended on a seasonal tax on grain harvests.

Using a database, the economists gathered information about the level of political sophistication of societies before the 1500s. They knew whether regions were organized by tribes, or by large, complex states. They also knew what the major crop in each society was.

In ancient Africa, Asia and Europe, for instance, societies had access to a large catalog of different grains, including barley, wheat and rice. They also had access to one root crop, the yam.* And in the ancient Americas, societies had access to one kind of grain, corn, and three different kinds of root crops—white potatoes, sweet potatoes and cassava.

There was a clear correlation between crop choice and political complexity. Societies that grew grain tended to have more hierarchical political systems—empires, even—like the rice-cultivating and wheat-cultivating kingdoms of ancient India. Tuber crops were associated with smaller, more local political units.

When the economists examined that agricultural data, they found that more productive regions did not necessarily lead to more complex societies. The crucial factor wasn't the amount of food that a society could produce; it was the type of food they chose as their main crop—grain or tuber.

Does the theory make sense?

Consider, for a second, what that means. In Diamond's version of events, certain regions were "cursed"* because they were less efficient at growing food. Low productivity leads to low agricultural surpluses, which then leads to less complex societies. According to the economists' data, the productivity of the land didn't matter. The "curse"* was in the type of crop.

The theory is open to debate, of course. One problem is that most tuber-growing societies lived in the tropics, where there was also endemic disease* that slowed the growth of complex civilizations. Anthropologists also point out that to the best of our knowledge, tubers were domesticated thousands of years after cereals, so societies that grew grains had an advantage.

Then there is the case of the Incas,* who oversaw an empire that grew both grains and potatoes. The Incas developed a way of freeze-drying potatoes by leaving them out at high elevations. This technology allowed them to treat potatoes like grains: durable,

transportable and taxable.

Still, the overall picture—the connection between grains and civilization—has amazed top economists. "It's an extremely original attempt to come to deal with a very old question: why in some places hierarchies—peasants and priests and nobles and so on—have appeared," says Joel Mohyr, a professor of economics at Northwestern University, near Chicago. "They use economic analysis to point out something which I think is basically correct—that it's very important what kind of crop you're growing, that it affects the kinds of political institutions that develop."

【出典】 Jeff Guo (2016) "The sinister, secret history of a food that everybody loves." The Washington Post (https://www.washingtonpost.com/news/wonk/wp/2016/04/25/the-secret-ancient-history-of-the-potato-that-could-change-the-story-of-civilization/). (一部改変)

【注】

nutritious:	栄養のある	domesticate:	(野生生物)を栽培できるようにする
barley:	大麦	millet:	キビ<イネ科の植物>
staple:	主要な	manioc:	キャッサバ(cassava)のこと。根茎から取れる良質の澱粉はタピオカの原料
taro:	タロイモ、サトイモ	provocative:	挑発的な
archaeological:	考古学の	anthropological:	人類学上の
grain:	穀物	tuber:	塊茎<地下茎が肥大して塊状をなすもの。ジャガイモ、サトイモの類>
yam:	ヤムイモ<ヤマノイモ、ナガイモなど>	curse:	(動詞) (be cursed で)苦しむ、悩まされる (名詞) 災いの種、もと
endemic disease:	風土病、一地方特有の病気	Inca:	インカの人々<南米ペルーの Andes 山脈地方に住んでいた先住民族>

設問(1) Jared Diamond によって述べられていた従来の説とは、どのようなものですか。本文に即して、40 字以内の日本語で説明しなさい。

									40

設問(2) grains と tubers の特徴を、収穫と貯蔵を中心に、それぞれ 60 字以内の日本語で説明しなさい。(本文に即して説明すること)

									60

									60

設問(3)

(A) 下線部(ロ)a strange pattern in agricultural practices とは具体的にどのようなことか、本文に即して、60 字以内の日本語で説明しなさい。

									60

(B) 下線部(イ)の研究では、(A)の事実に対して、以下のような説が提唱された。本文に即して、空所に適する日本語を入れて、文章を完成させなさい。

(i)を主要作物とした地域では、(ii)に対する懸念から(iii)が生まれることになり、結果的に(iv)と(v)が発達することになった。

設問(4) 下線部(イ)で示された説に対して、本文で挙げられている例を用いて、100～120 字程度の日本語で反論しなさい。

									50
									100
									120

設問(5) 下線部(イ)の研究は、古くからの、どのような疑問を説明できると考えられますか。本文に即して、日本語で簡潔に答えなさい。

47 次の文章を読んで、下の問いに解答欄の範囲内で答えなさい。

（横浜市立大 2013）

The bathing machine that protected the considerable modesty of Queen Victoria has been returned to the beach at her seaside residence on the Isle of Wight.

The "machine", in effect a large cabin on wheels, had a changing room, a plumbed-in lavatory and a covered veranda surrounded by curtains to shield the royal personage from prying eyes until she had entered the water. It is believed to have been used by Victoria for more than 50 years before being converted into a chicken house after her death.

The beach at Osborne House, which was built by Victoria and her husband, Prince Albert, as their seaside residence, has also been restored and opened to the public for the first time. In her journals she described the beach as her "perfect paradise", and the Royal Family spent much of their summer there from the mid-1840s until her death at Osborne House in 1901. Osborne House was given to the nation by Edward VII in 1904 and was later used as a naval college and convalescent home. The beach and bathing machine have been restored by English Heritage as part of a £500,000 ($780,000) refurbishment.

The bathing machine once ran down grooves in a concrete slip that led into the sea. It would go in up to its axles and only then would Victoria open the veranda door and venture out. Screened by the curtains, she would descend a short flight of steps into the water. When she had finished and clambered back into the bathing machine it would be winched back up the beach with a steel cable.

Andrew Hann, an English Heritage historian, said: "Although the beach was private, the Solent was a public shipping lane and owners of small boats would approach quite close with binoculars. The Royal Family were celebrities then, as they are now, and we know they were annoyed by it."

On July 30, 1847, Victoria recorded the bathing machine's maiden voyage and her first dip in the sea. She wrote in her journal: "Afterwards drove down to the sea with my maids—went into the bathing machine, where I undressed and bathed in the sea (for the 1st time in my life). A very nice bathing woman attended me. I thought it delightful until I put my head under water, when I thought I should be stifled."

During July and August, Victoria would swim as often as once a day. She continued to use the machine after she was widowed in 1861 until infirmity made it impossible for her to climb stairs, let alone swim.

(出典　*The Times* より)

Notes

plumb:	to install a toilet and connect to water and drainage pipes in (a building or room).
lavatory:	toilet
prying:	inquisitive, curious.
convalescent:	someone who is spending time recovering after an illness.
refurbishment (n.)	< refurbish (v.): to repair a building.
groove:	a deep line cut into a surface.
clamber:	to climb or move in an awkward and laborious way.
winch (v.)	< winch (n.): a machine with a rope for lifting heavy objects.
binoculars:	an optical instrument with a lens for each eye, used for viewing distant objects.
stifle:	to make (someone) unable to breathe properly; suffocate.
infirmity:	physical or mental weakness.

(1) 女王がこの bathing machine を使用した期間・時期を、本文中のデータに基づいて詳しく述べなさい。

(2) bathing machine の使用目的を、本文に即して簡潔に説明しなさい。

(3) 女王が使用する際の目的に適合した bathing machine の構造上の工夫を本文に即して具体的に説明しなさい。

48 次の文章を読んで、下の問いに解答欄の範囲内で答えなさい。

（横浜市立大 2013）

The source of every new idea is the same. There is a network of neurons in the brain, and then the network shifts. All of a sudden, electricity flows in an unfamiliar pattern, a shiver of current across a circuit board of cells. But sometimes a single network isn't enough. Sometimes a creative problem is so difficult that it requires people to connect their imaginations together; the answer arrives only if we collaborate. That's because a group is not just a collection of individual talents. Instead, it is a chance for those talents to exceed themselves, to produce something greater than anyone thought possible. (ア)When the right mixture of people come together and when they collaborate in the right way, what happens can often feel like magic. But it's not magic. There is a reason why some groups are more than the sum of their parts.

Furthermore, there's evidence that group creativity is becoming more necessary. Because we live in a world of very hard problems—(イ)all the low-hanging fruit is gone—many of the most important challenges exceed the capabilities of the individual imagination. As a result, we can find solutions only by working with other people.

But how should we work together? What's the ideal strategy for group creativity? Brian Uzzi, a sociologist at Northwestern, has spent his career trying to answer these crucial questions, and he's done it by studying Broadway musicals. Although Uzzi grew up in New York City and attended plenty of productions as a kid, he doesn't exactly watch *A Chorus Line* in his spare time. "I like musicals just fine, but that's not why I study them," he says. Instead, (ウ)彼はそのような芸術形式が集団的創造性のモデルであると考えて、何千もの古いミュージカルを分析することに 5 年を費やした。"Nobody creates a Broadway musical by themselves," Uzzi says. "The production requires too many different kinds of talent."

Uzzi wanted to understand how the relationships of these team members affected the end result. Was it better to have a group composed of close friends who had worked together before, or did total strangers make better theater? What is the ideal form of creative collaboration? To answer these questions, Uzzi undertook an epic study of nearly every musical produced on Broadway between 1877 and 1990, analyzing the teams behind 2,258 different productions. He charted the topsy-turvy relationships of thousands of different artists, from Cole Porter to Andrew Lloyd Webber.

The first thing Uzzi discovered was that the people who worked on Broadway were part of an extremely interconnected social network. Uzzi then came up with a way to measure the density of these connections for each musical, a designation he called *Q*. In essence, the amount of *Q* reflects the "social intimacy" of people working on the play,

with higher levels of *Q* signaling a greater degree of closeness. For instance, if a musical was being developed by a team of artists who had worked together several times before—this is common practice on Broadway—that musical would have an extremely high *Q*. In contrast, a musical created by a team of strangers would have a low *Q*.

This metric allowed Uzzi to explore the correlation between levels of *Q* and the success of the musical. "Frankly, I was surprised by how big the effect was," Uzzi says. "I expected *Q* to matter, but I had no idea it would matter this much." According to the data, the relationships between collaborators was one of the most important variables on Broadway. The numbers tell the story: When the *Q* was low, or less than 1.7, the musicals were much more likely to fail. Because the artists didn't know one another, they struggled to work together and exchange ideas. "This wasn't so surprising," Uzzi says. "After all, you can't just put a group of people who have never met before in a room and expect them to make something great. It takes time to develop a successful collaboration." However, when the *Q* was too high (above 3.2) the work also suffered. The artists were so close that they all thought in similar ways, which crushed theatrical innovation. According to Uzzi, this is what happened on Broadway during the 1920s. Although the decade produced many talented artists—Cole Porter, Richard Rodgers, Lorenz Hart, and Oscar Hammerstein II—it was also full of theatrical failures. The problem, he says, is that all of these high-profile artists fell into the habit of collaborating with only their friends. "Broadway [during the 1920s] had some of the biggest names ever," says Uzzi. "But the shows were too full of repeat relationships, and that stifled creativity. All the great talent ended up producing a bunch of mediocre musicals."

What kind of team, then, led to the most successful musicals? Uzzi's data clearly demonstrates that the best Broadway shows were produced with *intermediate* levels of social intimacy. A musical produced at the ideal level of *Q* (2.6) was two and a half times more likely to be a commercial success than a musical produced with a low *Q* (< 1.4) or a high *Q* (> 3.2). It was also three times more likely to be lauded by the critics. This led Uzzi to argue that creative collaborations have a sweet spot: "The best Broadway teams, by far, were those with a mix of relationships," Uzzi says. "These teams had some old friends, but they also had newbies. This mixture meant that the artists could interact efficiently—they had a familiar structure to fall back on—but they also managed to incorporate some new ideas. They were comfortable with each other, but they weren't *too* comfortable."

(出典　Jonah Lahrer, *Imagine* より)

Notes

neuron:	a special cell transmitting nerve impulses.
sociologist:	a person who studies sociology.
Northwestern:	Northwestern University.
epic:	grand in scale.
topsy-turvy:	in a state of confusion.
designation:	name.
metric:	a system of measurement.
stifle:	to prevent.
mediocre:	average.
laud:	to praise
newbie:	newcomer.

(1) 下線部(ア)を和訳しなさい。

(2) 下線部(イ)はどのような状況を表しているのか日本語で説明しなさい。

(3) 下線部(ウ)を英訳しなさい。

(4) *Q* の値の高・中・低によってそれぞれどのような結果が生じるのかとその理由を本文に即して日本語で説明しなさい。

49 次の文章を読んで、下の問いに解答欄の範囲内で答えなさい。

（横浜市立大 2013）

One evening at the end of the first century AD, Gaius Plinius Caecilius Secundus (the man known to future readers as Pliny the Younger) left the house of a friend in Rome in a state of righteous anger. As soon as he reached his study, Pliny sat down and, in order to collect his thoughts (and perhaps with an eye to the volume of letters he would one day assemble and publish), wrote about that night's events to the lawyer Claudius Restitutus. "I have just left in indignation a reading at a friend of mine's, and I feel I have to write to you at once, as I can't tell you about it personally. The text that was read was highly polished in every possible way, but two or three witty people—or so they seemed to themselves and a few others—listened to it like deaf-mutes. They never opened their lips or moved a hand, or even stretched their legs to change from their seated postures. What's the point of all this sober demeanour and scholarship, or rather of this laziness and conceit, this lack of tact and good sense, which makes one spend an entire day doing nothing but causing grief and turning into an enemy the man one came to hear as one's dearest friend?"

It is somewhat difficult for us, at a distance of twenty centuries, to understand Pliny's dismay. In his time, authors' readings had become a fashionable social ceremony and, as with any other ceremony, there was an established etiquette for both the listeners and the authors. The listeners were expected to provide critical response, based on which the author would improve the text—which is why the motionless audience had so outraged Pliny; he himself sometimes tried out a first draft of a speech on a group of friends and then altered it according to their reaction. Furthermore, the listeners were expected to attend the entire function, whatever its length, so as not to miss any part of the work being read, and Pliny felt that those who used readings as mere social diversions were little better than hoodlums. "Most of them sit around in the waiting-rooms," he fumed to another friend, "wasting their time instead of paying attention, and ordering their servants to tell them every so often if the reader has arrived and has read the introduction, or if he has reached the end. Only then, and most reluctantly, do they straggle in. And they don't stay long but leave before the end, some trying to escape unnoticed, others walking out with no shame.... (ア)More praise and honour are due to those whose love of writing and reading out loud is not affected by the bad manners and arrogance of their audience."

The author too was obliged to follow certain rules if his reading was to be successful, for there were all sorts of obstacles to overcome. First of all, an appropriate reading-space had to be found. Rich men fancied themselves poets, and recited their work to large crowds of acquaintances at their opulent villas, in the *auditorium*—a room built specially for that purpose. Some of these wealthy poets, such as Titinius Capito, were generous and

lent their *auditoria* for the performances of others, but mostly these recital-spaces were for the exclusive use of their owners. Once his friends had gathered at the appointed place, the author had to face them from a chair on a dais, wearing a new toga and displaying all his rings. According to Pliny, (イ)this custom doubly hindered him: "he is at a great disadvantage by the mere fact of sitting down, even though he may be as gifted as speakers who stand" and he had the "two main aids to his delivery, i.e., eyes and hands" occupied with holding his text. Oratorical skills were therefore essential. Praising one reader for his performance, Pliny noted that "he showed an appropriate versatility in raising or lowering his tone, and the same dexterity in going from loftier subjects to baser ones, from simple to complex, or passing from lighter subjects to more serious ones. (ウ)彼の非常に心地よい声はもう一つの強みであり、彼のつつましさ、恥じらい、緊張感が一層その良さを高めた。そしてそれらは常に朗読会を引き立てるものである。I don't know why, but shyness suits an author better than confidence."

(出典　Alberto Manguel, *A History of Reading* より、一部改変)

Notes

righteous:	morally acceptable or fair.
posture:	a particular position of the body.
sober:	serious and sensible.
demeanour:	behavior or manner
conceit:	too much pride
tact:	sensitivity or consideration
diversion:	entertainment or relaxation
hoodlum:	a hooligan or gangster.
fume:	to feel, show, or express great anger.
straggle:	to move slowly
fancy oneself:	to regard oneself, often wrongly, as something.
opulent:	luxurious
villa:	a large and luxurious country house.
auditoria (plural)	/ auditorium (singular)
dais:	a low stage or platform to make a speech.
toga:	a piece of clothing worn by the ancient Romans.
oratorical:	connected with the art of public speaking; rhetorical.
versatility (n.)	< versatile (adj.) : able to adapt or be adapted to many different functions

	or activities.
dexterity:	skill in performing tasks, with the hands or mind.
lofty:	noble, sublime or advanced.

(1) Pliny が怒って友人の家を出た理由を、本文に即して、日本語で簡潔に述べなさい。

(2) 下線部(ア)を和訳しなさい。

(3) 下線部(イ)の表す具体的な内容を、本文に即して、日本語で簡潔に述べなさい。

(4) 下線部(ウ)を英訳しなさい。

50 次の英文を読み、(1)～(6)に続く答えとしてもっとも適切なものを、(7)～(10)は問の答えとして最適なものをそれぞれ(a)～(d)から１つ選びなさい。

（上智大・外国語学部英語学科 2015）

In the mid-nineteenth century, (1)work began on a crucial section of the railway line connecting Boston to the Hudson River. The addition would run from Greenfield, Massachusetts, to Troy, New York, and it required tunneling through Hoosac Mountain, a massive impediment*, nearly five miles thick, that blocked passage between the Deerfield Valley and a tributary** of the Hudson.

James Hayward, one of New England's leading railroad engineers, estimated that penetrating*** the Hoosac would cost, at most, a very manageable two million dollars. The president of Amherst College, an accomplished geologist, said that the mountain was composed of soft rock and that tunnelling would be fairly easy once the engineers had breached the surface. ...

Everyone was wrong. Digging through the Hoosac turned out to be a nightmare. The project cost more than ten times the budgeted estimate. If the people involved had known the true nature of the challenges they faced, they would never have funded the Troy-Greenfield railroad. But, (5)had they not, the factories of northwestern Massachusetts wouldn't have been able to ship their goods so easily to the expanding West, the cost of freight would have remained stubbornly high, and the state of Massachusetts would have been immeasurably poorer. (6)So is ignorance an impediment to progress or a precondition for it?

The economist Albert O. Hirschman, who died last December, loved paradoxes like this. He was a "planner," the kind of economist who conceives of grand infrastructure projects and bold schemes. But his eye was drawn to the many ways in which plans did not turn out the way they were supposed to — to unintended consequences and perverse outcomes and the puzzling fact that the shortest line between two points is often a dead end.

"The Principle of the Hiding Hand," one of Hirschman's many memorable essays, drew on an account of the Troy-Greenfield "folly," and then presented an even more elaborate series of paradoxes. Hirschman had studied the enormous Karnaphuli Paper Mills, in what was then East Pakistan. The mill was built to exploit the vast bamboo forests of the Chittagong Hill Tracts. But not long after the mill came online the bamboo unexpectedly flowered and then died, a phenomenon now known to recur every fifty years or so. Dead bamboo was useless for pulping; it fell apart as it was floated down the river. Because of ignorance and bad planning, a new, multimillion-dollar industrial plant was suddenly without the raw material it needed to function.

But what impressed Hirschman was the response to the crisis. The mill's operators quickly found ways to bring in bamboo from villages throughout East Pakistan, building a new supply chain using the country's many waterways... The result was that the plant was blessed with a far more diversified base of raw materials than had ever been imagined. If bad planning hadn't led to the crisis at the Karnaphuli plant, the mill's operators would never have been forced to be creative. And the plant would not have been nearly as valuable as it became.
(Adapted from "The Gift of Doubt: Albert O. Hirschman and the power of failure," by M. Gladwell, *The New Yorker*, June 24, 2013, p.74,)

*impediment ＝ barrier
**tributary ＝ stream / river
***penetrate ＝ go through

(1) The "work" in line 1 refers to _____ .
(a) building a railway line that would go around a mountain to Deerfield Valley
(b) constructing a tunnel through a mountain for trains to go through
(c) connecting Hudson River and New York by a series of canals
(d) building a road between Boston and New York for quick access

(2) Tunneling through Hoosac Mountain was _____ .
(a) thought to be easy, for they had only to build a barrier for five miles
(b) considered a better option than building the railway line
(c) challenging, for five miles of hard rock had to be cut through
(d) thought to be a worse option than opening a passage to the Hudson

(3) Prior to building the tunnel, experts were of the opinion that _____ .
(a) building the tunnel would be very difficult because it had to be long
(b) they would not be able to raise the money needed for building the tunnel
(c) the tunnel would consume more money and time than they had worked out
(d) they could build the tunnel with relative ease on a reasonable budget

(4) The president of Amherst College assured others that _____ .

(a) the Hoosac was made up of extremely hard rock top to bottom
(b) tunnel builders would only have to face initial problems in breaking through the top rock
(c) the Hoosac was a clay mountain that lacked even a hard cover of soft rock
(d) engineers would be required to check if the surface rock was hard or soft

(5) In context, "had they not" stands for _____ .

(a) "if they had not given the money to finish the expensive railroad"
(b) "if they had not rushed the railroad project"
(c) "if they had not been aware of the challenges they faced"
(d) "if they had not stopped funding the Troy-Greenfield railroad"

(6) The underlined question the author poses is closest in meaning to:

(a) "Does absence of knowledge necessarily hinder human development?"
(b) "Do ignorant people try to block progress?"
(c) "Can ignorance be eliminated given that it is an impediment to progress?"
(d) "Can the absence of progress be one of the reasons for ignorance?"

(7) Who, according to the author, was Albert O. Hirschman?

(a) He was an engineer who specialized in studying reasons for why constructions go wrong and how they can be fixed.
(b) He was a researcher who looked for ways to build grand infrastructure projects with the least amount of expenses.
(c) He was a scholar who studied cases in which the results turned out to be different from what was expected.
(d) He was a planner who had the responsibility to make sure that organizations do not have to spend more than necessary.

(8) What was the feature common to the many cases that Hirschman dealt with in "The Principle of the Hiding Hand"?

(a) All of them related to projects that completely failed, resulting in nothing productive or advantageous.
(b) All of them were projects whose outcomes turned out to be different from what the planners had expected.
(c) All of them were constructed by firms whose administrators were corrupt and unwilling to spend much.
(d) All of them involved structural deficiencies that could have been avoided by greater awareness of economics.

(9) What was the tragedy faced by the new mill constructed in East Pakistan?

(a) Thu builders had the wrong map and built the mill far away from where it would have been most productive.
(b) The mill was solidly built, but the machinery was so out-dated that it could not exploit the vast bamboo forests of the hills.
(c) The newly constructed mill could not be used because the source of paper the operators had relied on no longer existed.
(d) The construction of the mill had cost so much that the contractors were left with no money to start operating the mill.

(10) What does the story of the Karnaphuli plant permit us to say?

(a) Bad planning always leads to a crisis from which there is absolutely no escape.
(b) Even when our great plans seem to go wrong, we must try to do good to others.
(c) Even a disastrous result can at times be turned into a success if we don't give up.
(d) The cause of major failures and crises is lack of creativity and good planning.